

ABSTRACT

A method of separating semiconductor elements formed in a wafer of semiconductor material using a laser producing a primary laser beam, and an arrangement and diffraction grating used in the method. The at least one primary laser beam is split into a plurality of secondary laser beams using a first diffraction grating having at least a first grating structure relative to the wafer, by impinging the at least one primary laser beam on the first grating structure. At least one first score is formed by moving the laser relative to the wafer in a first direction. The method further forms at least one second score by moving the laser relative to the wafer in a second direction. Before moving the laser relative to the wafer in the second direction, the method alters the first grating structure to a second grating structure relative to the wafer.